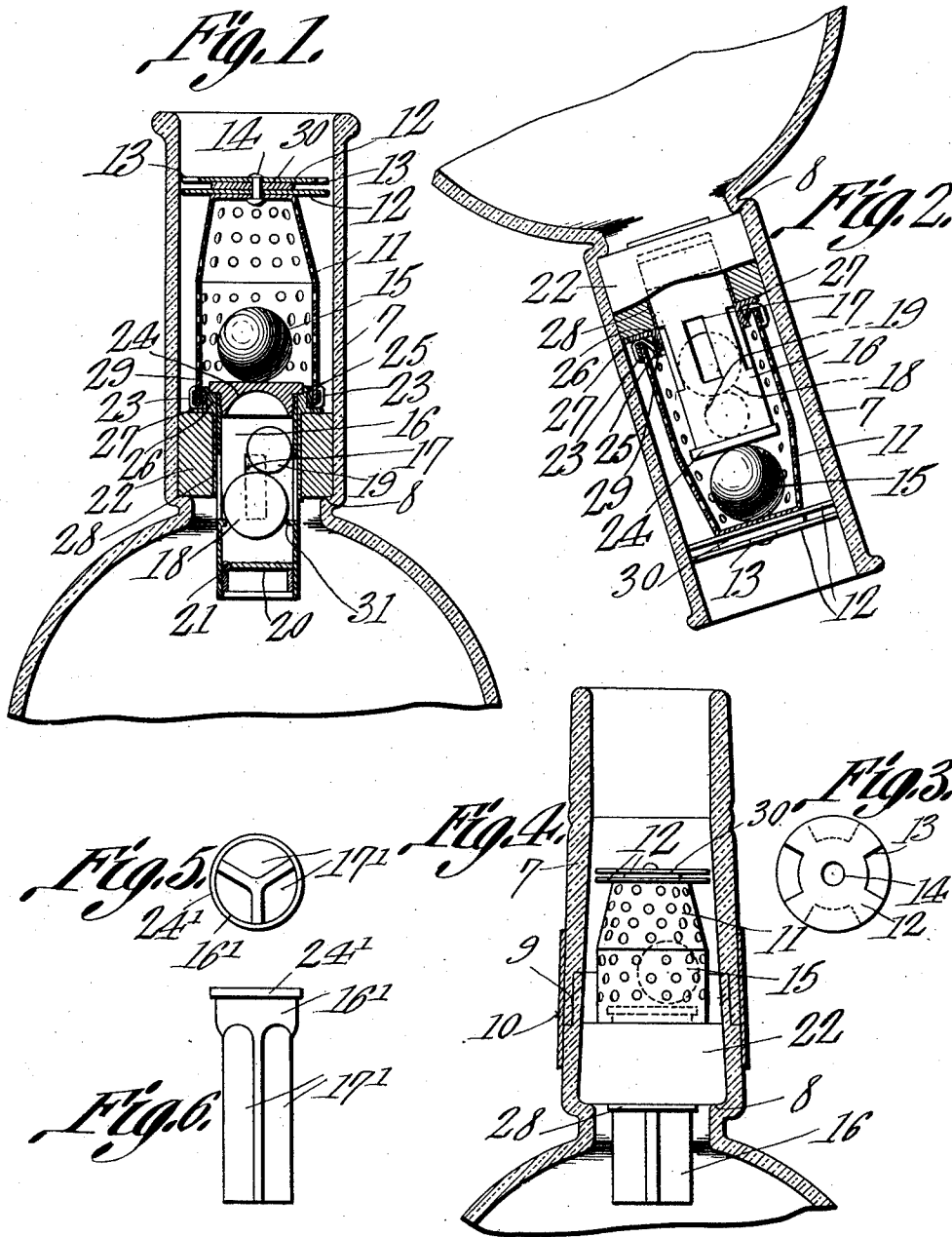


M. PEREZ.
NON-REFILLABLE BOTTLE.
APPLICATION FILED OCT. 2, 1911.

1,034,030.

Patented July 30, 1912.



Witnesses

J. P. Dineen
L. H. W. W. W.

Miguel Perez, Inventor

by *C. A. Snow & Co.*
Attorneys

UNITED STATES PATENT OFFICE.

MIGUEL PEREZ, OF CHICAGO, ILLINOIS.

NON-REFILLABLE BOTTLE.

1,034,030.

Specification of Letters Patent.

Patented July 30, 1912.

Application filed October 2, 1911. Serial No. 652,358.

To all whom it may concern:

Be it known that I, MIGUEL PEREZ, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Non-Refillable Bottle, of which the following is a specification.

This invention relates to non-refillable bottles, and has for its object to provide an improved means for preventing the refilling of bottles.

It is a further object of the present invention to provide certain improvements over the construction shown in my former Patent No. 956,597, issued May 3, 1910.

To this end the invention is embodied in certain novel arrangements and construction of parts as hereinafter described and as illustrated in the accompanying drawings, wherein similar reference characters indicate similar parts, and wherein:

Figure 1 is a sectional view of a bottle embodying the invention, with parts broken away. Fig. 2 is a similar view showing the position of the various parts when the contents of the bottle is being poured out. Fig. 3 is a plan view of the guard. Fig. 4 is a view similar to Fig. 1 embodying certain modifications. Figs. 5 and 6 are views of the slidable member used in the modified form.

Referring in detail to the drawings, the neck of the bottle is designated as 7, the same being provided with a lower shoulder or seat 8. An annulus 22 of cork or similar material fits within the neck of the bottle and seats on the shoulder 8. A ring 26, which is preferably of suitable metal, is arranged above the annulus 22 and has a lower flange 27 seating on the said annulus and a depending bushing 28 fitting within the annulus. At the upper end of the said ring is a flange 25, somewhat narrower than the flange 27, and around the upper edge of the bore passing through the said ring is an annular rabbet 29 which forms a valve seat.

A tubular member 16 is slidably mounted through the bushing 28 and the ring 26 and is provided with a plurality of elongated ports 17 intermediate its ends. Into the upper end of the said tubular member is screw-threaded a head 24 which is adapted to seat on the ring 26 and which has an inner concavity. A collar 21 fits within the lower end of the tubular member 16 and has a valve 20 hinged to the upper end thereof.

Within the tubular member 16 and above the valve 20 are arranged lower and upper non-buoyant balls 18 and 19, the latter ball being of smaller size than the ball 18 and the ball 18 being arranged to seat on a ring 31 in the tubular member 16 below the ports 17.

A perforated or foraminous inverted cup-shaped member 11 is arranged over the ring 26, having the lower end thereof passed over the said ring and the upper flange thereof. A plurality of leaf springs 23 are secured to the lower end of the member 11 internally thereof with their free ends projecting upward. These springs 23 are adapted to snap under the flange 25 and thus secure the cup-shaped member 11 over the ring 26 against removal. The upper end of the cup-shaped member 11 is tapered outwardly or upwardly. Within the member 11 is arranged a non-buoyant ball 15.

To the upper end of the cup-shaped member 11 is secured a guard for preventing the insertion of implements below same in order to interfere with the workings of the various parts. This guard comprises a pair of spaced disks 12, each having peripheral notches 13 which are disposed in a non-registering position with respect to each other. The said disks are spaced apart by a washer 30 and are secured to the upper end of the member 11 by the rivet 14. The notches 13 in being positioned in an off-set manner permit the flow of liquid therethrough but prevent the insertion of an implement or another object through the guard, thus protecting the parts below same.

In use, when the bottle is in upright position the tubular member 16 is in lowered position, the valve head 24 seating on the ring 26 to close the passage between the ring and its bushing and the said tubular member. The valve 20 is also seated on the collar 21, the ball 18 seats on the ring 31, and the ports 17 are arranged below the ring 26. Upon the bottle being inverted the tubular member 16 will slide outward to bring the ports 17 beyond the ring 26 and permit the passage of the fluid through the tubular member and through the ports 17 to escape out of the cup-shaped member 11 and the guard, the valve 20 being opened upon the bottle being inverted, the ball 18 moving from the ring or seat 31 and a ball 19 which is normally above the ball 18 partially entering the concavity of the head 24. Thus as the bottle is inverted the contents

may be poured therefrom and upon the bottle being returned to an upright position the tubular member 16 drops to normal position, the ball 18 seating on the ring 31 and valve 20 swinging against the collar 21 and the ball 15 is forced against the valve head 24 to assist in returning the tubular member to its normal position. When the bottle is inverted, the ball 15 drops within the cup-shaped member into the tapered end thereof and upon being brought to an upright position the said ball is caused to roll against the valve head 24 to prompt the tubular member returning to its normal position. It will therefore be seen that the bottle in being brought to an upright position is prevented from being refilled by the valves which are provided.

In the modified form, the tubular member 16 is substituted by a solid member 16' having the upper valve head 24' and having the longitudinal recesses 17' for permitting the passage of the fluid upon the bottle being inverted. The modified form also shows a tapered neck 7' of which the mouth is contracted. In this case the neck of the bottle is split intermediate its ends to permit the insertion of the various parts of the valve mechanism and the sections of the neck are cemented together as indicated at 9 by a male and female joint and a metallic band 10 is secured around the said

joint to make the neck firm in any suitable manner. If desired, the band 10 may be screwed over the neck.

It is also understood that this invention is susceptible of alteration in its minor details within the scope of the appended claim without departing from the spirit of the invention.

What is claimed as new is:—

The combination with a bottle neck, of an annulus fitting therein; a ring seating on the said annulus and having a depending bushing fitting within the annulus, a tubular member slidably mounted within the bushing having ports intermediate its ends, a valve head secured to the upper end of the tubular member adapted to seat on the said ring and having an inner concavity; a ring within the tubular member below the said ports; a ball arranged within the tubular member above the said ring and arranged to seat on the ring; and a ball arranged above the said ball adapted to partially enter the said concavity upon the bottle being inverted.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

MIGUEL PEREZ.

Witnesses:

VINCENZO CHIARO,
VITO CORONO.